

## **DETAILED ACTION**

### ***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed October 31, 2007, have been entered and have been carefully considered. Claims 5 and 9 are amended and claims 5 – 6 and 9 – 11 are pending. In view of Applicant's amendment to the claims removing the phrase "or the like", the Examiner has withdrawn the 35 USC 112, 2nd paragraph rejection of claims 5 – 6 and 9 – 11. The invention as currently claimed is not found to be patentable for reasons herein below.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

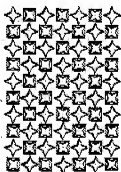
### ***Drawings***

3. The drawing submitted on 10/31/07 requires a label in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended."

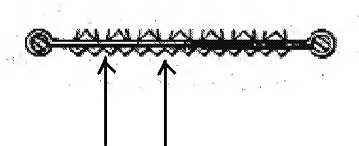
### ***Claim Rejections - 35 USC § 103***

4. Claims 5 – 6 and 9 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward (US 165,143).

Woodward is directed to a culinary grater (Title) comprising a sheet of metal having perforations on both sides, the holes on each side alternating with depressed perforations that form the grating surface on the opposite side (column 1). It should be noted that the Examiner equates the holes alternating with depressed perforations is equated to Applicant's "concave and convex portions opposite to and adjacent to each other". As shown in the figure below, each perforation has a petaloid configuration consisting of 4 petal-like portions.



As shown by the arrows in the figure below, the grater has v-shaped valleys between adjacent petaloid shaped pieces.



The Applicant requires that the "on each side surrounding the convex portion there is located a concave portion"; it should be noted that the holes are alternating with depressed perforations as described above, therefore, each convex portion has a concave portion adjacent. As to the recitation that the thin meshy porous body is "for a

core member for a battery electrode, various filter members", it should be noted that the recitation is not given patentable weight at this time since the prior art meets the structural limitations set forth and there is nothing on record to evidence that the prior art product could not function in the desired capacity or that there is some additional implied structure associated with the term. The burden is shifted upon the Applicant to evidence the contrary.

Woodward discloses the claimed invention except for thickness is between 10 – 50 micrometers, longitudinal length of the openings is 365 – 510 microns, the lateral length of the openings being 360 – 510 micrometers, the opening ratio is between 45 – 60% and peak-to-peak dimension between adjacent convex portions is approximately 550 um. Absent a showing of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to create a substrate with a thickness of 10 – 50 micrometers, an opening length of 360 to 510 micrometers the opening ratio is between 45 – 60% and peak-to-peak dimension between adjacent convex portions is approximately 550 um since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness, opening length and opening ratio in order to create a mesh with an optimal level of porosity and rigidity.

### ***Response to Arguments***

5. Applicant's arguments filed October 31, 2007 have been fully considered but they are not persuasive.
6. Applicant argues that Woodward does not teach the new limitation of "on each side surrounding each convex portion there is located a concave portion". It should be noted that as discussed in the rejection above that Woodward does teach a concave portion on a side of a convex portion as shown by the alternating concave and convex portions. It should be noted that the claim language does not actually require a surrounding concavity feature as Applicant argues but instead a concave portion *that is located in a surrounding side*.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. CHRISS whose telephone number is (571)272-7783. The examiner can normally be reached on Monday - Thursday, 8 am - 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JC/  
Examiner, Art Unit 1794  
January 14, 2008

/Ula C Ruddock/  
Primary Examiner, Art Unit 1794

